

NATURAL RESOURCES - AIR QUALITY

Town of Eastham Goals and Performance Standards

The Cape Cod Commission, through its Regional Policy Plan for Barnstable County, has established an overall planning goal and minimum performance standard for Air Quality. Eastham's goal and minimum performance standard are consistent with the Regional Policy Plan.

- 2.6.1 Goal:** To maintain and improve Eastham's air quality so as to ensure a safe, healthful, and attractive environment for present and future residents and visitors.

Minimum Performance Standards

- 2.6.1.1 Developments shall be in compliance with the Massachusetts State Implementation Plan (SIP) and DEP's Air Pollution Control Regulations, 310 CMR 7.00.

Other Development Review Policies

- 2.6.1.2 Mixed-use development that results in a net decrease in automobile mileage and air emissions should be encouraged.
- 2.6.1.3 Drive-through services as part of development and redevelopment should be avoided to decrease emissions from engine idling.
- 2.6.1.4 Development and redevelopment should use energy-efficient means of construction, operation and maintenance in order to reduce air emissions.

Existing Conditions

The sources of air quality problems such as smog, acid rain, emission of greenhouse gases and other pollutants travel widely in the atmosphere and Eastham is not entirely in control of its own air quality destiny. Regional sources of air pollution as far away as the Great Lakes and New York City can effect the Cape's air quality. Although air quality is a regional issue, it is important to recognize that local sources of air pollution also effect local air quality. Measures should be implemented to protect Eastham and to contribute to reducing regional air quality problems.

The Town of Eastham generally enjoys good air quality as does the rest of the Cape. However, over the last decade the Cape has experienced elevated ozone levels exceeding public health standards during the summer. The Pollutant Standard Index Reading, a measure of air quality, ranging from good to unhealthful, establishes a threshold of 100+ as unhealthful air quality (Table 1). In the summer of 2002 an air quality monitoring station in Truro measured an ozone reading exceeding 200, twice the unhealthful threshold.

Table 1: USEPA Air Quality Index

Pollutant Standard Index Reading	Color Coded Forecast	Air Quality
100+	Red	Unhealthful
89 - 99	Orange	Approaching Unhealthful
51 - 88	Blue	Moderate
0 – 50	Green	Good

These elevated levels contribute to decreased air quality as a result of the combination of volatile organic compounds (VOCs) and oxides of nitrogen (NO_x) and sunlight create “smog”. Increased ground level ozone can cause health problems including eye irritation, lung dysfunction and aggravating existing lung ailments. The primary sources of VOCs and NO_x emissions are motor vehicle fueling, tailpipe emissions, factories and power plants. The Massachusetts Department of Environmental Protection (DEP) estimates that stationary sources such as factories and power plants represent only 6% of VOC emissions. Since the bulk of smog forming emissions are generated by smaller mobile and stationary sources present in Eastham, some ways to improve air quality include: proper vehicle maintenance, reducing the number of short automobile trips and engine idling, using efficient heating systems, reducing the use of gasoline powered lawn and garden equipment, limiting wood and brush burning.

While the future of the Energy Wind Farm off Cape Cod in Nantucket Sound is uncertain, the energy produced by such a facility would be clean and contribute to cleaner air by offsetting the demand for energy from less efficient and higher emission-generating fossil fuel-fired generators. This would help to reduce overall emissions and promote higher average air quality in the region.

Implementation

Recommended Town Actions

- A. Eastham should examine existing land use patterns and identify suitable locations for mixed-use development aimed at reducing automobile travel and air emissions.
- B. The Town should work with the Commission and DEP to further the understanding of air quality problems that affect Eastham and provide public education about the ways residents and businesses can improve air quality.
- C. Promote the use of alternatives modes of transportation including: public transit services, carpooling, bicycling and walking to destinations when possible.
- D. Research the availability of bio-diesel and its potential use for the municipal fleet. Work with other outer cape towns to promote distribution of bio-diesel.

See “Air Quality”, “Land Use”, “Transportation” and “Energy Sections” in the implementation schedule.